



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/043,722

01/08/2002

Robert P. Gilmore

MOBI-017/00US

6468

301375-2037

7590

07/09/2004

EXAMINER

NGUYEN, SIMON

Inter Corporation

Mailstop SC4/202

2200 Mission College Boulevard

Santa Clara, CA 95052

ART UNIT

PAPER NUMBER

2685

9

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,722

Applicant(s)

GILMORE, ROBERT P.

Examiner

SIMON D NGUYEN

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-36 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 20 is objected to because of the following informalities: the term "the method of claim 21," should be changed to ..the method of claim 17,.... Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Rodeffer (5,507,025).

Regarding claim 1, Rodeffer discloses a receiver having first and second mixers, wherein the first mixer mixes a receiving signal (first signal) with a first LO signal (second signal) wherein the second mixer mixes output signal 420 (fourth signal) with a second LO signal (third signal) to generate output signal 425 (fifth signal) (fig.4) wherein the first and second LO are tunable LO signals (column 7 lines 51-62) having different step sizes (column 8 line 52 to column 9 line 8, column 9 lines 37-67).

Allowable Subject Matter

4. Claims 14-36 are allowed.

Regarding claims 14, 17, 21, 28, 32, the prior art of record disclose numerous image-inject mixers for use in a communication transceiver having first and second mixers serially coupled in the I path, third and fourth mixers serially coupled in the Q path, and first and second tunable local oscillators providing first and second local oscillator signals in-phase, quadrature with one another to the mixers, wherein the phase shifted 90o between the I an Q paths and wherein the first and second tunable LO having different step sizes.

The prior art of record does not specifically disclose the frequency of the first LO signal is the first step size (in Hz) times N, the frequency of the second LO signal is the second step size times M, and I times M is equal to N +/-1, where N, M, I are integers.

Regarding claims 15-16, 18-20, 22-27, 29-31, 33-36, these claims are allowed as being dependent upon dependent claims that have been allowed.

5. Claims 2-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, The prior art of record does not specifically disclose the frequency of the first LO signal is the first step size (in Hz) times N, the frequency of the

Art Unit: 2685

second LO signal is the second step size times M, and I times M is equal to $N \pm 1$, where N, M, I are integers.

Regarding claims 3-13, these claims are objected as being dependent upon dependent claim that has been objected.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Application/Control Number: 10/043,722

Page 5

Art Unit: 2685

Simon Nguyen

June 24, 2004

A handwritten signature in black ink that reads "Simon Nguyen". The signature is written in a cursive style, with the first name "Simon" and the last name "Nguyen" clearly legible.